CANNADY (C. G.)

Chronic endometritis

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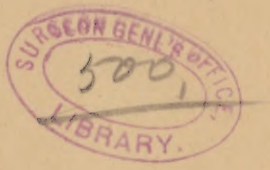

CHRONIC ENDOMETRITIS:

ITS ÆTIOLOGY, MODERN METHODS IN DIAGNOSIS AND TREATMENT.*

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Endometritis has been known ever since the generative organs of the female have been made a study. It has been more frequently found than any other disease of the female pelvic organs. Notwithstanding its frequency, the literature of the last few years concerning it is scant—the whole profession having "gone on a strike" for conditions demanding more major proceedings. This "craving for strong drink," is almost satisfied, and the assertion that very soon conservative men will triumph, and the affections demanding minor treatment, so to speak, will receive more attention than formerly will be verified.

Acute endometritis will not be discussed, and only the chronic form is here referred to. Endometritis of the cervix, and endometritis of the corpus, will be considered separately. Endo-cervicitis, cervical endometritis, and chronic cervical catarrh, are appropriate synonyms for the frequent inflammation of the cervical mucous membrane.

The cervical mucous membrane is lined throughout with a single layer of epithelium—ciliated on the elevated portions; columnar at the depressed—(De Sinety.) A longitudinal mesial ridge on the anterior and posterior walls, throws the mucous membrane into numerous folds, having the appearance of arbor-vitæ, and are so termed. Küstner asserts that these folds, before puberty, pass into the corpus, but

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not so in multiparæ. Glands of the racemose type are found with the elongated multiple ducts extending deeply into the connective tissue dilated at their extremity; the lining of these ducts consist of a basement membrane (membranæ propriæ), inside of which is found columnar epithelium. This condition of the mucous membrane is found to reach to the os externum, but not to pass beyond that point; for anterior to os externum, the epithelium has all the characters of skin, viz.: squamous epithelium in many layers resting on vascular papillæ. De Sinety, Ruge, and Veit, consider the presence of glands on the vaginal cervix a pathological condition.

Foremost in the production of this condition is, injury to the cervix in parturition. Lacerations, slight though they may be, will give a starting point. These lacerations are most frequent since forceps and ergot are so commonly used. Vaginitis may extend upward, or endometritis may extend downward, and produce the same pathological condition. Pathological changes are in proportion to the severity and duration of the inflammatory process; we have either epithelium, glands, or connective tissue involved. The epithelium in laceration is exposed, subsequently congested and inflamed, and thrown into fine folds or wrinkles, owing to poliferation of areolar tissue and distention of blood-vessels, giving a granular appearance, which were considered by the older pathologists to be enlarged papillæ; but they are now known to be new formations due to areolar hyperplasia. The glands are enlarged and new glands are formed from the proliferation of epithelium; the hyperplasia occludes the ducts, and secretion from the glands are retained, forming cysts—"ovulæ Nabothi"—which may be felt as small oval masses in the cervix. These may rupture, discharging both their cubical epithelium, and also papillæ which may proliferate. With all severe types of cervical catarrh, considerable hyperplasia will be found, and more or less increase in the amount of connective tissue constituting areolar hyperplasia. Glandular patches are found, having a red appearance, extending beyond the os externum, that were con-

sidered until recently as ulceration. It is well remembered how Ruge, of Berlin, explained by microscopical appearances satisfactorily the fallacy of this supposition, demonstrating that the surface is covered with epithelium, and that the supposed ulcerated points are new formations, and have no connections with the mucous membrane papillæ.

Diagnosis is easily made, generally speaking. A digital examination reveals a sensitive cervix—large, soft, and puffy in a multiparæ. In multiparæ we have, in addition, a patulous os, evidences of lacerations and pea-like nodules (Nabothian follicles.) From vaginal catarrh, the differential diagnosis is easily made by Schultzes' method, viz Soaking tampon in glycerine, three parts, and tannin, one part, and inserting it against the os after having douched the vagina thoroughly. This to be left in for twelve hours. If we find pus on the tampon, the inference is that the discharge is cervical. The presence of leucorrhœa, dense, thick, opaque, and tenacious, pain in back and loins, increased on exercise and coition, irregular menstruation and sterility, are frequent symptoms.

Treatment, to be successful, requires a knowledge of the pathological condition present. Constitutional treatment tending to improve nutrition to and correct gouty, rheumatic or scrofulous diathesis, is of first importance in most diseased conditions. If the cervix is red and deeply congested, leeches may be used, or a Buttles' scarificator plunged into it at several points, and free depletion obtained under antiseptics, followed by cotton tampons, saturated with anhydrous glycerine and boro-glyceride used every third night and let vaginal injections of water, 110 or 115° F. night and morning—using not less than three gallons with corrosive chloride of mercury, sufficient to make a solution of one to four thousand. If there is displacement, a proper fitting pessary will do much in restoring and equalizing the circulation. Lacerations should always be repaired if possible; the removal of the mucous plug and cleaning the cervical canal and applying iodine, two parts, and carbolic acid, one part, will aid much in

curing the endometritis, but before this can be effected every particle of the mucus must be cleared away. This mucus is so tenacious as to render it very difficult to remove, either by curette or syringe; a method will be described under corporal endometritis for facilitating this. If ovulæ Nabothi be present, the cysts must be opened, preferably by a thermo-cautery, and the cysts emptied. If there is much granulation tissue, many use escharotics, which should be discarded along with argenti nitras, for the reason that their effect cannot be measured, and the cicatricial contraction is generally considerable. The writer has seen A. Martin, of Berlin, perform amputation cervix for all granulations that are not easily healed—his explanation being that carcinoma was so apt to occur. Gebhardt, of Berlin, uses pyroligneous acid to erosions of the cervix with the happiest results.

Electricity may be relied on as the most efficacious line of treatment. The continuous galvanic current is used—the positive being active—the negative pole over the abdomen. An electrode is used that will accurately fit the canal, using from thirty to fifty milliamperes from five to ten minutes; Gautier, of Paris, uses a platinum electrode covered with absorbent cotton dipped in a solution of iodine, using the positive as the active pole; chemical decomposition of the solution occurs, iodine is set free at the cervix, and the current passing from the positive to the negative pole diffuses the iodine into every recess, and to the sub-mucous tissue. If there is much secretion, the use of electrodes of zinc or copper used with the negative pole—a low current being employed—and the sound kept moving to prevent its adhering, will be attended with the best results. If an indurated condition of the cervix, with narrowing of canal be present, negative application for dilation of cervix, and its softening effect on the tissues will be called for.

Chronic corporeal endometritis is an affection of the mucous membrane of the corpus uteri. The mucous membrane is composed principally of glands and inter-glandular tissue; the latter, Leopold, of Dresden, considers mainly lymphatics. Ruge, the writer remembers, classified the

forms as glandular and interstitial. When simple hypertrophy is present, and glandular tissue is in excess, he terms it glandular interstitial hypertrophicæ, and *vice versa* if the interstitial is in excess; if hyperplasiæ is present, and glandular in excess of interstitial, he terms it glandular interstitial hyperplasticæ, and *vice versa* if interstitial predominates. With the hyperplastic condition, he classifies endometritis fungosæ and hæmorrhagicæ, differentiating as either the glandular or interstitial predominates as before. Another is added—visible cystic.

While De Sinety, Klebs, Heinricus, Slavjansky, Heintzman, and Ruge may differ in their classification, still all are mainly agreed that the mucous membrane, ducts, glands, interstitial tissue, and blood vessels are enlarged, and either hypertrophied or hyperplastic elements are present. If chronic endometritis has been of long duration, atrophy will be present.

Ætiology and frequency depend on defective parturition, exposure to cold at catamenial periods, the use of sounds, gonorrhœa, and displacement.

Symptoms of chronic endometritis are menorrhagia, leucorrhœa, dysmenorrhœa, pain in back and loins, sterility, and abortions.

Diagnosis is important as distinguishing cervical from corporeal endometritis. To discover whether the discharge is from the cervix or corpus, will aid much. Schroeder's method of using tannin-glycerine on tampons to the cervix, as before mentioned, will distinguish whether the discharge is from the vagina or uterus, but does not distinguish cervical from corporeal endometritis; but, if we can remove the mucus from the cervix, and then, after the manner described by Grynfeldt, of Montpelier, direct a jet of hot water against the cervix until the uterine muscular tissue contracts, on discontinuing the douche, if corporeal endometritis is present, we will discover a muco-purulent secretion escaping freely from the cervix. This gives good results unless much hyperplasia exists, in which event, it is useless.

The method used by the writer for differential diagnosis is original, so far as he is aware, and gives as good results in hyperplasia and hypertrophy as in any other conditions. First, a small uterine electrode to the cervix is used, making it the cathode, care being taking not to insert it farther than the internal os; the inactive anode is placed on the abdomen. A current of thirty milliamperes is used for a few minutes; the mucus is thinned and liquefied, gases evolve, and it is forced from the canal; the uses of a cotton-wrapped probe will remove what remains; a stream of tepid water cleanses the parts. The electrode is again inserted, this time beyond the internal os, to the fundus, and withdrawn slightly to prevent the point impinging against the fundus. A current of twenty to thirty milliamperes is turned on as before, and if corporeal endometritis be present, we will find the same muco-purulent fluid and gases emanating from the cervix as before; their absence will certainly indicate no active endometritis of the corpus.

Corporeal endometritis is most likely present if the catamenial flow is in excess; when there is muco-purulent discharge from the cavity, menorrhagia will almost invariably be present. The use of the curette and the examination of the scrapings with the microscope will aid in detecting large decidual cells or fragments of the villi of the chorion—and hence, tracing the cause to incomplete emptying of uterus after parturition. Or, we may find epithelial cells having many nuclei and an irregular form, signifying carcinoma or round spindle-shaped cells indicating sarcoma.

Treatment embraces: 1st. Medical; 2nd. Surgical; 3rd. Electrical.

(1.) *Medical treatment* includes correction of gouty, rheumatic, and strumous diatheses; baths, change of climate, etc., together with nutritious diet, will all materially aid the cure in most cases.

(2.) *Surgical Treatment*—When we find the mouths of the utricular glands occluded, and hyperplasia of the mucous membrane present with the fungus variety of endometritis, we may dilate the cervical canal and use a curette (the

writer prefers Martin's), curetting carefully all the mucous membrane, washing out the cavity, and packing with gauze soaked in iodized phenol. The use of iodized phenol on a cotton-wrapped probe has always, in the writer's hands, been unsatisfactory, for some injury is likely to happen to the congested mucous membrane, either in its introduction or withdrawal. The use of the intra-uterine syringe is more satisfactory, but care must be taken that only a few minims are injected.

The wholesale use of the curette should certainly be condemned, and especially when used at the physician's office, and the patient is immediately to return to her home. The writer never uses the curette, except at the patient's home, and under strict antisepsis, the patient being kept in bed for some time afterwards. The presence of pelvic peritonitis is a positive contra-indication to its employment.

(3.) *Electrical Treatment*—The writer regards this as the ideal remedy for most forms of endometritis, but it must be used with judgment, and by those experienced. Reliable instruments must be used for accurately determining the amount of current used, and a distinct motive must be in view; the proper current selected, and carefully applied under strict antisepsis, and at regular intervals. Quiet should be enjoined for several hours after each application, if the best results are to be looked for.

In simple catarrhal inflammation, where the mucous membrane is hyperæmic, soft, swollen, with excessive discharge of a clear, thin, alkaline fluid, we may effect a cure by instituting drainage. This can be effected by applying the negative pole of the continuous current to the endometrium for some time, and subsequently making active applications with the anode after the os has been rendered patulous for drainage. The mucus, or muco-purulent fluid contained in the cavity of the uterus, must be removed by thinning it with the cathode before the anode will be effectual. A current of thirty milliamperes, used every third day for eight minutes at each sitting, will generally suffice. Strict antiseptic precautions must be employed, and no force used in

the introduction of the electrode that would result in injury to the endometrium. The point must not impinge against the fundus. To prevent this, it must be coated with shellac; or, after reaching the fundus, let it be slightly withdrawn before turning on the current; otherwise, the point will penetrate the fundus.

There is no doubt but that discredit is being brought on electricity in gynecology by extremists who consider it a panacea for all pelvic ills; moreover, by another class who use it without ever having given the subject much thought or study, and expect it to yield results at once, and without any skill in its application. The writer is aware that electro-therapeutics embraces one of the broadest fields in medicine; time and expense are both essential to its successful employment; it has certain well-defined usages, and as long as it is employed in such cases as the following, which have fallen under the writer's observation, it will continue to be by those men considered useless: An ordinary family faradic battery, used both for chorea and insomnia on different patients, the same current, with sponge covered electrodes to sacrum and pubis for fibroid tumors of uterus and pelvic cellulitis, also sponge-covered electrode to abdomen, and vaginal electrode, as active, for endometritis, the continuous current being used. All the cases above reported occurred in the practice of physicians standing well in the medical profession as to ability.

As eminent a gynecologist as Sir Lyon Playfair, of London, said, in a lecture delivered to the Post-Graduate Medical School in London, in the writer's presence, that he considered that the use of electricity after the manner employed by Apostoli, of Paris, would cure endometritis in one-third the time consumed by any other method. The writer's experience in the use of electricity for the cure of endometritis has been so satisfactory, that it is employed in the conditions mentioned in this paper almost exclusively, with the result of effecting a cure in at least one third the time consumed by other methods.